

REMARKS

Claims 1-34 remain pending in the instant application. All claims presently stand rejected. Claims 1, 3, 4, 6, 9, 10, 13, 15, 22, 27, and 28 are amended herein. Claim 34 is newly presented. Entry of this amendment and reconsideration of the pending claims are respectfully requested.

Claim Rejections – 35 U.S.C. § 103

Claims 1-5, 9-12, 13-16, 20-26, 30-33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bird (US 6,321,235) in view of Smith et al. (US 5,594,886).

“To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. All words in a claim must be considered in judging the patentability of that claim against the prior art.” M.P.E.P. § 2143.03.

Independent claim 1 is nonobvious over the cited prior art (Bird and Smith) for at least the three independent reasons set forth below. Anyone of the three reasons set forth below each independently renders claim 1 nonobvious over the combination of Bird and Smith.

Reason #1: Independent claim 1 recites, in pertinent part, “the dynamic cache having a dynamically changing size.” Applicants respectfully submit that the combination of Bird and Smith fails to teach or suggest a dynamic cache having a dynamically changing size.

The Examiner cites col. 5, lines 26-29 of Bird as teaching this element of claim 1. While Bird discloses a global cache 40 (see FIG. 3) including a static SQL cache 42 and a dynamic SQL cache 44, it does not teach or suggest that dynamic SQL cache 44 has “a dynamically changing size.” In fact, Bird does not use the terms “static” and “dynamic” to describe the changing or non-changing size of static SQL cache 42 and dynamic SQL cache 44, but rather uses these terms to describe the nature of the SQL requests satisfied by these cache portions. To be sure, Bird discloses,

There are two basic types of SQL statements, static and dynamic. In using static SQL the user embeds SQL requests for data in an application program. An SQL precompiler removes these statements from the application program and replaces them with function calls whose parameters

indicate a specific section entry for the package corresponding to the current source file. The removed SQL statement is then sent to DB2 for compilation. (*Bird*, col. 1, lines 52-59)

Dynamic SQL is generally used for ad hoc SQL requests. (*Bird*, col. 2, line 1)

Static SQL requests will be satisfied from the static SQL cache 42 while dynamic SQL requests will be routed to the dynamic SQL cache 44 once the package 46 and section entry 48 information have been obtained from the static SQL cache 42. (*Bird*, col. 5, lines 33-38)

Accordingly, Bird clearly uses the terms “static” and “dynamic” to describe the type of SQL requests that are satisfied by the respective caches within the global cache 40. However, nowhere does Bird disclose, teach, or suggest that dynamic SQL cache 44 has a “dynamically changing size”, as recited in independent claim 1.

In fact, Bird expressly teaches away from a dynamic cache having a dynamically changing size in the following portions,

One thing to keep in mind when **setting the size** of the global cache is that it is a working cache: that is, it must have sufficient memory to hold the sections that are currently being executed. (*Bird*, col. 10, lines 49-52)

Determining the appropriate size for the global cache is important. (*Bird*, col. 10, lines 62-63)

Accordingly, these portions of Bird disclose that a size for the global cache is “determined” and then “set”. Determining an appropriate fixed size in advance and then setting the cache to this predetermined fixed size is contrary to the claim language reciting a “dynamic cache having a dynamically changing size.”

Reason #2: Independent claim 1 recites, in pertinent part, “evicting a portion of the stable data within the static cache **to a dynamic cache...**” Applicants respectfully submit that the combination of Bird and Smith fails to teach or suggest evicting stable data from a static cache into a dynamic cache.

The Examiner acknowledges that “Bird fails to teach evicting portions of the stable data within the static cache to a dynamic cache when the static cache is full.”

Office Action mailed 07/27/06, page 3. However, the Examiner cites Smith as teaching this missing element.

Although the Examiner has already acknowledged this point, Applicants respectfully note that no portion of Bird teaches or suggest evicting data from static SQL cache 42 into dynamic SQL cache 44. Second, Applicants respectfully submit that Smith also fails to teach or suggest this same element.

To be sure, the Examiner cites the following portion of Smith as the basis for rejecting this claim element.

However, it is apparent that an identical result could be obtained by storing values in the bits of the LRU register 33 which do not identify the unique path of the memory locations from which the cache lines have been retrieved or stored, **and then, when the cache 34 is full, evicting the cache line of data in the memory location** identified by the values of the bits stored in the LRU register 33.

Smith, col. 10, lines 19-25 (Emphasis added). Therefore, this portion of Smith merely discloses that cache lines are evicted from cache 34 when cache 34 is full. However, this portion of Smith fails to teach or suggest evicting data from a first cache to a second cache. Or, more specifically, this portion of Smith clearly fails to teach or suggest evicting stable data from a static cache to a dynamic cache.

Reason #3: Independent claim 1 recites, in pertinent part, “enrolling the evicted portion of the stable data into the dynamic cache as soft data ...” Applicants respectfully submit that the combination of Bird and Smith fails to teach or suggest enrolling evicted data from a static cache into a dynamic cache.

As mentioned above, Smith discloses evicting a cache line from cache 34 when cache 34 is full. However, neither Smith nor Bird teach or suggest **enrolling** an evicted portion of data in a static cache into a dynamic cache.

Consequently, the combination of Bird and Smith fails to teach or suggest all elements of claim 1, as required under M.P.E.P. § 2143.03, for at least the above three reasons. Independent claim 13, 22, and 30 includes similar nonobvious elements as independent claim 1. Accordingly, Applicants request that the instant §103(a) rejections of claims 1, 13, 22, and 30 be withdrawn.

The dependent claims are nonobvious over the prior art of record for at least the same reasons as discussed above in connection with their respective independent claims, in addition to adding further limitations of their own. Accordingly, Applicants

respectfully request that the instant § 103 rejections of the dependent claims be withdrawn.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants believe the applicable rejections have been overcome and all claims remaining in the application are presently in condition for allowance. Accordingly, favorable consideration and a Notice of Allowance are earnestly solicited. The Examiner is invited to telephone the undersigned representative at (206) 292-8600 if the Examiner believes that an interview might be useful for any reason.

CHARGE DEPOSIT ACCOUNT

It is not believed that extensions of time are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a). Any fees required therefore are hereby authorized to be charged to Deposit Account No. 02-2666. Please credit any overpayment to the same deposit account.

Respectfully submitted,

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